

MECHANISM FOR MOUNTING LCD TV ON WALL

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a mechanism for removably mounting a light object on a wall and more particularly to an improved mechanism for mounting an LCD TV on the wall.

2. Description of Related Art

It is typical to hang a light object (e.g., painting, etc.) on a wall. Further, it was impossible of mounting a TV on a wall many years ago because TV is a bulky one. However, the above impression is not always correct since light TVs such as (LCD (liquid crystal display) TVs) are commercially available and are gaining popularity among vast consumers in recent years. A typical LCD TV can be as thin as only several centimeters. Hence, it is now possible of mounting an LCD TV on a wall.

A conventional mechanism A for mounting an LCD TV on a wall is shown in FIGS. 1 and 3. The mechanism A is implemented as a parallelepiped box having an open top. The mechanism A comprises a plurality of threaded holes 111 on its front side and a plurality of teardrop shaped openings 221 (i.e., four shown at four corners of a virtual square) on its rear side. In assembly, a plurality of screws 112 are driven through the threaded holes 111 into an LCD TV 3 for fastening and a plurality of expansion screws 41 are partially driven into a wall 4 to leave a distance C between the head of each expansion screw 41 and the wall 4 (see circle of FIG. 3) for permitting the mechanism A to hang thereon.

But this is unsatisfactory for the purpose for which the invention is concerned for the following reasons: A precise relative positioning of the openings 221 and the mechanism A is difficult. Hence, it is often that a person

has to adjust the relative positioning of the openings 221 (i.e., the LCD TV 3) and the mechanism A one or more times by unfastening and fastening the expansion screws 112 also one or more times. This is a very tedious and time consuming process. Further, the distance C is very small, thus prohibiting a convenient mounting process.

Another conventional, improved mechanism B for mounting an LCD TV 3 on a wall 4 is shown in FIGS. 2 and 3. The only difference between the mechanisms A and B is that the latter incorporates two longitudinal, parallel slits B1 on its back, each slit B1 having a bottom hook 221 and an intermediate hook 221 as a replacement of the teardrop shaped openings 221. It can eliminate the drawback of the rough relative positioning of the openings 221 (i.e., the LCD TV 3) and the mechanism B by the provision of the hooks 221. However, the second drawback about the fact that the distance C is very small is not solved yet. Thus, the need for improvement still exists.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a mechanism for mounting a light object (e.g., LCD TV) on a wall, the mechanism being shaped as a parallelepiped box having an open top, comprising a removable support including four pairs of first threaded holes on a front side adjacent four corners so that the light object and the removable support are adapted to be threadedly fastened together, and a second threaded hole at either side; and a mated fixed support received in the removable support, the fixed support including a plurality of openings on a rear side and a transversely elongated slot at either side, wherein a plurality of first fasteners are driven through the openings into the wall for securing the fixed support to the wall, and a plurality of second fasteners are driven through the slots and the second threaded holes for fastening the removable and the fixed supports together. The mechanism can carry out a

precise relative positioning of the LCD TV and the wall.

In one aspect of the present invention, the second fasteners are expansion screws.

5 In another aspect of the present invention, the openings are of teardrop shape.

The above and other objects, features and advantages of the present invention will become apparent from the following detailed description taken with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

10 FIG. 1 is a perspective view of a conventional mechanism for mounting an LCD TV on a wall;

FIG. 2 is a perspective view of another conventional mechanism for mounting an LCD TV on a wall;

15 FIG. 3 is a side view schematically depicting the mechanism fastened at the LCD TV to be mounted on the wall;

FIG. 4 is an exploded view of a preferred embodiment of mechanism for mounting an LCD TV on a wall according to the invention;

FIG. 5 is a perspective view of the mechanism of the invention;

20 FIG. 6 is a side view schematically depicting the mechanism of the invention fastened at the LCD TV to be mounted on the wall; and

FIG. 7 is an exploded perspective view of FIG. 6.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 4, 5 and 6, there is shown a mounting mechanism constructed in accordance with the invention. The mechanism is shaped as a
25 parallelepiped box having an open top. The mechanism comprises a removable support 1 including four pairs of threaded holes 111 on its front side adjacent four corners, a threaded hole 121 at either side, and a plurality of screws 112

driven through the threaded holes 111 into an LCD TV 3 for fastening; and a mated fixed support 2 received in the removable support 1, the fixed support 2 including four teardrop shaped openings 221 (i.e., four shown at four corners of a virtual square) on its rear side 22, a transversely elongated slot 21 at either side, a longitudinal bent section 23 at either side of the front, a bottom 24, and an interior space 25. Note that the LCD TV 3 can be replaced by another suitable object in any of other embodiments without departing from the scope and spirit of the invention.

Referring to FIG. 7 in conjunction with FIG. 6, a plurality of expansion screws 41 are driven through the top tapered portions of the openings 221 into a wall 4 for securing the fixed support 2 to the wall 4. Further, a person can drive two screws 122 through the slots 21 and the threaded holes 121 for fastening the removable support 1 and the fixed support 2 together if the relative positioning of the fixed support 2 and the wall 4 is as precise as desired. This finishes the mounting process of the mechanism on the wall 4. It is also seen that a removal of the removable support 1 and the LCD TV 4 from the fixed support 2 and the wall 4 is made very easy by unfastening the screws 122.

While the invention herein disclosed has been described by means of specific embodiments, numerous modifications and variations could be made thereto by those skilled in the art without departing from the scope and spirit of the invention set forth in the claims.